

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of

Application of Harris CapRock)	
Communications, Inc. for a 30-Day)	Call Sign: E060157
Special Temporary Authorization (“STA”))	
for Fixed Earth Station Demonstration)	File No:
in the C-band and Ku-band)	

Application for Special Temporary Authorization

Harris CapRock Communications, Inc. (“Harris CapRock”), pursuant to Section 25.120 of the Commission’s Rules, 47 C.F.R. § 25.120, seeks a 30-day special temporary authorization (“STA”) to demonstrate its tri-band earth station onboard vessel (“ESV”) terminal – Model ST5000-2.4 – at a fixed location in Concord, California in portions of the conventional C-band and in the conventional Ku-band. Grant of this STA will enhance Harris CapRock’s existing authority to operate the subject ESV terminal, which does not cover these temporary inland operations (particularly at C-band). Harris CapRock respectfully requests that this STA request be granted for a period of 30 days commencing on July 1, 2016 or as soon as possible thereafter.

I. BACKGROUND

As the Commission is aware, Harris CapRock has been engaged in extensive development and implementation of its ST5000-2.4 terminal. In addition to commercial authority to operate the ST5000-2.4 in C-band and Ku-band frequencies,¹ it holds an STA

¹ See Harris CapRock, File Nos. SES-MOD-20150915-00599 & SES-AMD-20151205-00907 (Call Sign E060157) (granted on Feb. 25, 2016) (“*Commercial License*”).

for maritime operations in the Ka-band with O3b's NGSO system² and experimental authority to test the terminal at certain fixed locations in the United States.³

Because the terminal is now authorized to operate on a commercial basis in conventional C-band and Ku-band frequencies, Harris CapRock requests a 30-day STA from the International Bureau to demonstrate the ST5000-2.4 ESV terminal in the C-band and Ku-band at an additional site in Concord, California (coordinates: 38° 00' 23" N, 122° 02' 38" W). In the interest of administrative convenience, Harris CapRock incorporates by reference the C-band and Ku-band technical information that was previously submitted to the Commission as part of its application to operate the ST5000-2.4 terminal⁴ and will comply with all conditions of that approval and any additional conditions that may be imposed in the requested STA. Additionally, Harris CapRock provides the attached draft FCC Form 312 and Schedule B to provide the Commission with details regarding the limited operations proposed herein.

II. DISCUSSION

C-band and Ku-band operations at the Concord, CA location will be conducted with the following U.S.-licensed GSO FSS satellites: IS-18 at the 180° E orbit location and Galaxy 12 at the 129° W orbit location. The ST5000-2.4 terminal will communicate with both satellites in the conventional Ku-band (*i.e.*, 11.7-12.2 GHz (space-to-Earth) and 14.0-

² See Harris CapRock, Special Temporary Authority, File No. SES-STA-20160224-00171 (Call Sign E060157).

³ See Harris CapRock, Experimental Radio Station License, File No. 0009-EX-PL-2016.

⁴ See *Commercial License*, Technical Appendix.

14.5 GHz (Earth-to-space)). In the C-band, Harris CapRock will limit its C-band testing to the following transmit and receive frequency ranges:

IS-18: 6.035-6.055 GHz, 6.343-6.348 GHz, 6.345-6.355 GHz and 6.405-6.415 GHz.

Galaxy 12: 6.345-6.380 GHz.

As confirmed in the attached interference analysis, Harris CapRock can operate the ST5000-2.4 terminal in the proposed C-band uplink frequency ranges without causing harmful interference to any existing authorized terrestrial licensees.⁵

At all times, Harris CapRock will operate the terminal consistent with the technical characteristics specified in this STA application and examined in the C-band interference analysis. Additionally, Harris CapRock agrees not to cause harmful interference to authorized terrestrial operations in the C-band, and will accommodate any future licensees to the extent necessary to avoid harmful interference. In the event that its operations cause harmful interference to other lawfully operating spectrum users, Harris CapRock will immediately suspend operations until such interference is resolved. Harris CapRock also will comply with all FCC rules regarding Ku-band earth station operations and will similarly suspend operations in the unlikely event of interference in that band. Harris CapRock does not seek nor will it claim protection from authorized spectrum users for its receive operations.

Harris CapRock also notes that its limited and intermittent demonstration operations will be conducted at a temporary, segregated area in parking lot at the Concord, CA site. Consistent with the radiofrequency hazard assessment for the ST-5000 terminal

⁵ See Micronet Interference Analysis.

previously submitted to the Commission, will take all necessary measures to ensure that no members of the public will be exposed to excessive levels of radiofrequency radiation. Specifically, only trained personnel will operate the terminal and the area around the terminal will be cordoned off during transmit operations to ensure that no members of the general public may approach the terminal or otherwise be located in an area where they may be exposed to excessive levels of radiofrequency radiation.

Grant of the requested 30-day STA will strongly serve the public interest. Authorizing limited, temporary demonstration of the ST5000-2.4 terminal will allow Harris CapRock to continue development and implementation of its new line of terminals, which will provide more robust broadband satellite communications services to a wide array of users, including vessels in motion, marine barges and remote oil platforms that may be unable to obtain communications services through alternative facilities. In addition, the proposed operations are fully consistent with Commission's rules and policies governing earth station operations in the conventional C-band and Ku-band.

III. CONCLUSION

For all of the foregoing reasons, Harris CapRock respectfully requests that an earth station STA be granted for 30 days commencing on July 1, 2016, or as soon as possible thereafter, to permit the limited operations described herein.